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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,331	12/31/2001	Matthew S. Turner	023829-0131	3253

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EXAMINER

NGUYEN, TAM M

ART UNIT PAPER NUMBER

1764

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/036,331	Applicant(s) TURNER ET AL.	
	Examiner Tam M. Nguyen	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 31-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 and 35-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/1/04; 2/19/03; 11/4/02; 4/5/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-30 and 35-37, drawn to an oil extraction process, classified in class 554, subclass 12.
- II. Claims 31-34, drawn to an organic composition, classified in class 585, subclass 1.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed can be used in a materially different process such as in a process for separating asphaltenes from a crude oil.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Jason Pauls on February 3, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-30 and 35-37.

Art Unit: 1764

Affirmation of this election must be made by applicant in replying to this Office action. Claims 31-34 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-10, 12, 14, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Crawford et al. (2,596,010).

Crawford discloses a process for separating oil from oil-containing solids (e.g., soybean or cotton). The oil containing solids are contacted with an isohexane solvent to form an extraction mixture which is separated into a solids-containing fraction and an oil-containing solvent fraction. Finally, the oil-containing solvent is then passed into a separation zone under vacuum to form an oil fraction. The isohexane solvent comprises 95 wt. % of methylpentane (either 2-methylpentane or 3-methylpentane) and less than .5 vol. % of aromatic. The contacting

Art Unit: 1764

step is operated at a temperature of from 80 to 150° F. It is noted that Crawford does not specifically disclose the wet dew point of the isohexane solvent. However, the Crawford isohexane solvent is similar to the claimed solvent. It would be expected that the Crawford solvent would have the wet dew point as claimed. (See col. 2, lines 38-49; col. 3, lines 8-10, 55-62; col. 4, lines 24-45)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 1764

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7, 11, 13, 15, 16, 21-30 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawford et al. (2,596,010).

Crawford discloses a process for separating oil from oil-containing solids (e.g., soybean or cotton). The oil containing solids are contacted with an isohexane solvent to form an extraction mixture which is separated into a solids-containing fraction and an oil-containing solvent fraction. Finally, the oil-containing solvent is then passed into a separation zone under vacuum to form an oil fraction. The isohexane solvent comprises 95 wt. % of methylpentane (either 2-methylpentane or 3-methylpentane) and less than .5 vol. % of aromatic. The contacting step is operated at a temperature of from 80 to 150° F. It is noted that Crawford does not specifically disclose the wet dew point of the isohexane solvent. However, the Crawford isohexane solvent is similar to the claimed solvent. It would be expected that the Crawford solvent would have the wet dew point as claimed. (See col. 2, lines 38-49; col. 3, lines 8-10, 55-62; col. 4, lines 24-45)

Crawford does not disclose that the isohexane solvent includes no more than about 10 ppm of benzene. However, Crawford discloses that the solvent comprises no more than .5 vol. % of aromatic. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Crawford by using an isohexane solvent comprising no more than about 10 ppm of benzene because one of skill in the art would use a solvent comprising aromatic less than 0.5 vol. % including the claimed amount.

Art Unit: 1764

Crawford does not disclose that the plant material includes corn germ. However, Crawford discloses that the vegetable materials including soybean and wheat germ. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Crawford by using corn germ because one of skill in the art would use any plant materials that contain oil including corn germ.

Crawford does not disclose that the isohexane solvent includes at least 99.9 wt. % branched saturated aliphatic hydrocarbons having 6 carbon atoms and no more than 0.1 wt. % hydrocarbons having less than 6 carbon atoms. However, Crawford desires to use a pure solvent of isohexane. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Crawford by using the claimed solvent because one of skill in the art would use any pure isohexane including the claimed isohexane.

Crawford does not disclose that the oil product comprises no more than about 100 ppm isohexane solvent. However, Crawford intends to obtain a pure oil product which is separated from the solvent. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Crawford by producing a oil product comprising no more than about 100 ppm isohexane solvent because it is within the level of one of ordinary skill in the art to produce an oil product comprising the claimed amount of solvent because highly pure oil product is desired.

Crawford does not disclose the initial distillation stage to produce a vapor phase at a pressure P having a value of about 300 to 400 mmHg. However, it appears that the initial distillation is operated at a pressure less than atmospheric pressure. Therefore, it would have

Art Unit: 1764

been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Crawford by operating at the claimed pressure because one of ordinary skill in the art would operate at any pressure less than atmospheric pressure including the claimed pressure.

Conclusion

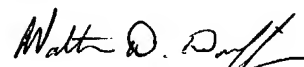
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen
Examiner
Art Unit 1764

TN


Walter D. Griffin
Primary Examiner